



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**UNITED STATES ARMY ENGINEER SCHOOL**  
**320 MANSCEN, SUITE 316**  
**FORT LEONARD WOOD, MO 65473**

ATSE-Z

2 February 2005

**MEMORANDUM FOR THE LEADERS OF THE UNITED STATES ARMY ENGINEER  
REGIMENT**

**SUBJECT: A Report on 2004 and the Way Ahead for 2005**

1. Greetings from Fort Leonard Wood, home of the Engineer Regiment! I want to begin by personally thanking all of you for your steadfast and honorable service to our Nation. Right now, across the world, Engineer Soldiers are serving with great distinction. Some of our Engineers have given the ultimate sacrifice—as of today we have lost 111 in operations in Iraq and Afghanistan—and our Nation will be eternally grateful. It is now, at the end of a year and at the beginning of a new year, that we all should pause, reflect and give thanks. With our unwavering efforts in the war against terror, with recent major natural disasters, and our rapidly transforming Army, it is clear that the Regiment will be needed even more in 2005.

2. I'd like to take a moment to get you current on actions the Engineer School has worked in 2004 and what we plan for 2005. The Engineer School made steady progress in a number of areas to Train, Transform, and Take Care of our Regiment. We recently revised our mission and vision, and established clear priorities, which I think you'll agree addresses our essential tasks in supporting the Nation and charting our future.

**Mission**

**The United States Army Engineer School trains, transforms, and takes care of the Army Engineer Regiment to provide Land Component Commanders with the joint engineer capabilities required to assure the mobility of the force and achieve victory in any military operation.**

**Vision**

- **A world-class center of expertise in joint engineer capabilities.**
- **The recognized leader in developing doctrine, organizations, and equipment capable of assuring the mobility of the land force—anytime, anywhere!**
- **The world's best trainer of military engineers for an Army serving a Nation at war.**

**Regimental Vision**

**Assure Freedom of Maneuver for the Joint Force, Land Component and Maneuver Commander.**

**USAES Priorities**

<b>Support the War</b>	Continually assess operational lessons and the reality of combat in complex and urban terrain in order to provide proactive and responsive support to the Army
<b>Initial Military Training</b>	Prepare Engineer Soldiers and leaders for war
<b>Training and Leader Development</b>	<ul style="list-style-type: none"> <li>• Develop adaptive and innovative warriors of character who are READY for leadership in combat—today and in the future</li> <li>• Promote an ethic of lifelong learning</li> </ul>
<b>Transformation</b>	<ul style="list-style-type: none"> <li>• Field an Engineer force that is indispensable to the Joint Force, Land Component and Maneuver Commander</li> <li>• Develop leaders capable of leveraging the capabilities of the entire regiment in support of the Joint Force Commander</li> <li>• Excite the Regiment in being part of the team</li> </ul>
<b>Retention</b>	Provide a climate that inspires Soldiers and civilians to choose the Army as their lifelong profession
<b>Enhance our Communities</b>	<ul style="list-style-type: none"> <li>• Make a positive difference where we work, live and play</li> <li>• Make Fort Leonard Wood the installation of choice for Soldiers and their families</li> </ul>

**3. Support the War.**

a. **Engineer Training Teams.** We spent much of 2004 assisting mobilizing units and units engaged in combat operations. The current environment of an adaptive enemy and continuously changing conditions demand more of this approach. Mobile Training Teams have been sent out to assist and train in Mine Action Center operations, the AN/PVS-14 HSTAMIDS mine detector, Geospatial operations, and Environmental Assessment/Awareness. We also deployed instructors to Kuwait to conduct the Reserve Component Engineer Captain's Career Course. More must be done in 2005 to ensure that units preparing for operations know what information, products, and training are available to ensure their preparation is as current as possible.

b. **Continuous Doctrine, Organizations, Training, Material, Leader, Personnel, and Facilities (DOTMLPF) Gap Analysis.** Critical lessons learned from current operations must be quickly integrated into the training base. We have conducted or participated in DOTMLPF analysis for IED (Improvised Explosive Device) Defeat, the Army's Counter Rocket Artillery and Mortar effort, Geospatial systems, construction equipment, and gap crossing capabilities. Our focus in 2005 will be in ensuring a thoroughly integrated Assured Mobility concept, leading the Army team on IED Defeat, developing and implementing a construction equipment strategic acquisition approach, implementing and assessing the reorganization of the Regiment and completely analyzing all aspects of the sapper as the expert in complex and urban terrain.

**4. Initial Military Training.** We must provide our Engineer Soldiers with the best skills and tools possible to meet and defeat any threat during conventional operations with special emphasis on



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operations in complex and urban terrain. Our Soldiers must receive the best possible training both here at Fort Leonard Wood and at their mobilization sites. With our Regiment performing superbly in operations around the world, the Engineer School is rapidly incorporating lessons learned and observations from current combat operations into both initial military training and our career courses with the ultimate goal of sending back to the field commander engineer warriors with the highest and most relevant engineer and leader skills.

a. **Warrior Tasks and Drills.** A major effort was placed on getting skilled junior engineer Soldiers and leaders with an even stronger warrior ethos into their first unit. Seeing the need to rapidly integrate new Soldiers into deploying formations we found it imperative to ensure that Soldiers are at their peak of training after OSUT and AIT. To achieve this in 2004, the Engineer School took major strides in incorporating Warrior Task and Battle Drills into the current Programs of Instruction (POIs). In 2005, you should see Soldiers coming into your formations with enhanced, more in-depth training in the proven fundamentals of Shoot, Move, and Communicate.



## WARRIOR CORE TASKS (IET & SUSTAINMENT)



### EVERY SOLDIER ...

#### SHOOT (16-17 TASKS)

- Qualify w/ assigned weapon
- Correct malfunctions w/ assigned weapon
- Engage targets with M240B MG
- Engage targets with M60 or M249 MG
- Engage targets with M2 Cal. 50 MG
- Engage targets with MK-19 MG
- Correct malfunctions of a MG (M2, M240B, M249, MK-19)
- Engage targets with weapon using a night vision sight (AN/PVS-4, AN/PAS-13, AN/TVS-5)
- Engage targets using an aiming light (AN/PEQ-2A, AN/PAQ-4)
- Employ mines and hand grenades

#### JOINT URBAN OPERATIONS (3 TASKS)

- Perform movement techniques during an urban operation
- Engage targets during an urban operation
- Enter a building during an urban operation

#### COMMUNICATE (4-5 TASKS)

- Perform voice communications (SITREP, SPOTREP, Call for Fire, & MEDEVAC)
- Use visual signaling techniques



### ~40 WARRIOR TASKS

#### MOVE (7-8 TASKS)

- Determine location on ground (terrain association, map, & GPS)
- Navigate from one point to another (dismounted & mounted)
- Move over, through, or around obstacles (except minefields)
- Prepare/operate a vehicle in a convoy

#### FIGHT (15 TASKS)

- Move under direct fire
- React to indirect fire (dismounted & mounted)
- React to direct fire (dismounted & mounted)
- React to unexploded ordnance hazard
- React to man-to-man contact (Combatives)
- React to chemical or biological attack/hazard
- Decontaminate yourself & individual equipment using chemical decontaminating kits
- Maintain equipment
- Evaluate a casualty
- Perform first aid for open wound (abdominal, chest, & head)
- Perform first aid for bleeding of extremity
- Select temporary fighting position

— ESSAYONS — "Let US Try"

b. **Cancellation of the B6 ASI Functional Course.** The senior leadership, with much input from the field commanders, is working what's best, long term for our Regiment with the B6 ASI (AVLB and ACE). The plan is to suspend the B6 ASI Course in order to apply the resources from this course to start immediate training of all of our initial entry engineer Soldiers on the Warrior Tasks and Drills during AIT. Therefore, the January 2005 Course will be the last B6 ASI course we will conduct until we receive additional resources to conduct both it and the Warrior Tasks and Drills. We continue to explore the best means of ensuring our ACE/AVLB operators receive proper training in the future.



## 5. Training and Leader Development.

a. **Engineer Officer Training.** The multi-faceted, maneuver-oriented skills of the engineer officer has served us well and serves as a model for the Chief of Staff's vision of a future Army leader: a decathlete with a broad understanding of operations armed with in-depth skills to support the Joint Warfighter. The skills of an engineer are well known in every command post and are often sought out to take on complex, challenging, and ambiguous operations. You witnessed in 2004 the end of Combined Arms and Services Staff School (CAS3) and its incorporation into the Engineer Captain's Career Course (ECCC) to become the Engineer Command and Staff Course (ECSC). ECSC has moved to the field as well; in Kuwait, we conducted 3 courses, graduating 101 RC officers. The use of Small Group Leaders—seasoned former engineer company commanders, many of whom are combat veterans—to teach ECSC continues. In 2004 we applied the same concept to our Engineer Officer Basic Course (EOBC) with seasoned 1LT(P)/CPTs staying after graduating from ECSC to teach and lead our junior lieutenants also in a small group setting. Our emphasis continues to be on training crucial engineer skills to junior leaders—but through the lens of current operations. Senior mentors (LTC and higher) spend a great deal of time mentoring our future leaders within the School. In 2005 we expect to continue these initiatives while also placing greater emphasis on the use of digital tools, from geospatial to battle command. Our goal is to work toward digitization of the School's environment so that it is comparable to our digitized units in the field.

b. **Engineer NCO Training.** The ANCOC and BNCOC courses have also been enhanced with recent lessons learned and fundamental observations from current operations. In October 2004, we removed common core subjects from ANCOC to allow more time to teach relevant critical skills to our SFCs, while BNCOC added 43 hours of Stand Alone Common Core material. Examples of this are 9 hours of lessons learned keying in on such classes as: React to Possible IEDs, and Cultural Awareness Considerations. The two courses, through the leadership of the MANSCEN NCOA, have spearheaded the planning and design of a standard Forward Operating Base (FOB) and MOUT site. These two training aids will be used by the Noncommissioned Officers attending NCOES. These facilities will give the instructors the ability to hone in on specific skills required of our Regiment's NCOs in this environment of urban terrain to better prepare them for deployment. I request your emphasis in sending your NCOs to these courses. While attendance at ANCOC has been at 95% in FY04, attendance at BNCOC was only 65%. As leaders we must show our commitment to developing our NCOs by letting them attend these critical schools at the earliest opportunity in their careers.

c. **Specialty Skills for our Engineer Soldiers and Leaders.** We must strive as a Regiment to promote more in-depth specialty training to provide highly skilled engineer Soldiers. In 2004, we partnered with the Marine Corps to train Soldiers at the Urban Breacher Course, at Camp LeJeune, NC. Additionally, the Sapper Leader Course took great strides to meet the needs of the field and the Sapper Leader Tab was approved for wear in September 2004. We are currently fencing 15 Sapper Leader Course slots per EOBC class to ensure lieutenants arrive at their first unit of assignment as well trained as possible. For 2005 we will increase the annual Sapper Leader Course student load to 800. Also new for 2005, 1<sup>st</sup> Engineer Brigade is hosting the first ever Best Sapper Competition to be held during ENFORCE. In 2004, the School led the Army's



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effort in Search Dog training—a skill which is highly sought by maneuver commanders. This will continue to be a growth area in 2005. Also in 2005, an explosive ordnance detection and neutralization course will be added to the specialty skills available for training. The pilot Search and Search Advisor Course took off successfully, training 46 searchers and 23 search advisors. The course spans person, vehicle checkpoint, mortar base-plate, survey, route, occupied and unoccupied building and elements of venue searches. Through the efforts of 3ID soldiers currently deployed to Iraq, we shall see how techniques and procedures taught during the course impact the preemption of insurgent activity in theater. We anticipate the feedback on the 3ID experience will significantly improve the course in 2005.

## 6. Transformation.

a. **Future Engineer Force.** At no time since World War II has the Regiment witnessed as much change over such a short period of time; 2004 will be known for monumental change within our Army and Regiment, when mere concepts quickly changed into the realities of a new force structure. In 2005 we continue the massive efforts associated with transforming the Total Engineer Force into a more responsive and effective organization for our Army. We currently do not see the Engineer Force Structure reducing in size, as many had thought. Hence, the future engineer structure will provide as many, if not more, leadership opportunities and professional development for our Soldiers and leaders as we have in the past. The resonating message I send to you is that the senior leadership of our Army sees the need for a strong Engineer Regiment and the future is very bright.

b. **Counter Explosives Hazard Center.** Solving the IED challenge is a top priority for the Engineer School. We owe this to our Army and Nation to solve immediately and to continuously develop solutions to defeat a complex, dedicated and adaptive enemy. I see the need for our Soldiers to quickly and remotely detect and neutralize any IED threat. To accomplish this, we must spiral cutting edge equipment from Industry into our engineer formations using innovative acquisition methods. In 2004, we made great strides in taking on the challenges of Improvised Explosive Devices (IEDs). The Army's Counter Explosive Hazard Center (CEHC) at the Engineer School is leading this endeavor through teamwork within our Regiment and with many elements within the Army, the Department of Defense, our Allies, and Industry to spiral capabilities into our formations as quickly as possible to defeat IEDs. This requires continual gap analysis as we are fighting an adaptive enemy who will adjust TTPs to counter our efforts. What works in OIF against coalition forces today, quickly shows up in OEF tomorrow, and vice versa. Much work has been done, but we are far from reaching our goal; 2005 will see a major effort in solving this challenge.

c. **The 67<sup>th</sup> Mine Dog Detachment.** The 67th Mine Dog Detachment saw a great deal of activity in 2004 with the deployment of two Mine Dog Squads to Afghanistan. The first squad deployed in February and cleared over 160,000 square meters prior to being replaced by a second squad in August. In May, a team of Specialized Search Dogs (SSD) deployed to Iraq to conduct counter terrorism search missions for 1<sup>st</sup> Cavalry Division. Furthermore, Mine Dog training in the United Kingdom is going very well. By May of 2005 all 30 dogs in the program will be trained.



d. **Engineer Equipment Fielding Initiatives.** We must strive to meet the needs of our Nation by providing the most modern, lethal, survivable, and effective pieces of equipment possible to our engineer soldiers. Much work is being done to 'spiral' into the force equipment to field faster than the current procedures. Equipment such as Tactical Fire Fighting Trucks, HSTAMIDS, Buffaloes, Meerkats, Skid Steer Loaders are some examples in 2004. While the Mongoose (an improved version of the MICLIC) contract was put on the shelf, significant strides were made in the decision to shift money to procurement of the AN/PSS-14. We look forward to much more work in this area in 2005 with respect to engineer construction equipment, digital topographic support system (DTSS), and more.

e. **MOS Consolidation.**

(1) Military Occupational Specialties (MOS) 21E Heavy Equipment Operator and 21J General Construction Equipment Operator are being consolidated into MOS 21E to improve the Soldier's skill set and to facilitate assignments at unit level.

(2) MOS 21S Topographic Surveyor will be converted into an ASI for 21T Technical Engineer. The Military Occupation Classification Structure (MOCS) proposal is awaiting final review before staffing through the command group and then through TRADOC to HRC. A request for "out of cycle" implementation will expedite the conversion to take effect October 2006.

(3) MOS 21L Lithographer and 21U Topographic Analyst will consolidate into one MOS and those skills associated with the Heidelberg press will be trained "just-in-time" for those Soldiers pending assignment to large scale print missions. The analysis of this consolidation was completed in November 2004 and the MOCS is currently being staffed.

7. **Strategic Communications.** The Engineer Regiment is a "Team of Teams," a diverse organization, comprised of the leadership within the Total Engineer Force (Army Reserve, National Guard, and Active), the US Army Corps of Engineers, Engineer leaders within our MACOMs, our Joint Commands, our CTCs, in Industry, engineers in our Allied forces, and our sister service engineers. While simultaneously engaged in a global war on terrorism and transforming, communication and cross-talk within our Regiment is essential. Our major efforts in Strategic Communication in 2004 centered upon visits to engineer commands around the world, ENFORCE, Councils of Colonels, Commandant's VTCs, and hosts of conferences both here at Fort Leonard Wood and in the Field. We must, however, do much better with communication in 2005. Some work has been done on collaborative techniques to more effectively communicate with the Field. We are now establishing an Army Knowledge Online Collaborative Website in order to get info out to the field faster! This website, located under TRADOC/Engineer School, will take more shape in the months ahead. The goal is for all leaders of the Regiment to have this site on their 'favorites' list, and visit it often to obtain current information and provide valuable feedback to the School. The collaborative website is only the short term goal. The long term goal is for everyone in the Engineer School to be connected digitally with the Field with 'Interactive' tools. This collaborative method will greatly enhance our abilities to develop innovative solutions.

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8. Let me conclude by again thanking you for all you do for our Army and our Engineer Regiment. Wherever the Command Team of the Engineer School traveled in 2004, we always heard from Senior Field Commanders that Engineers were truly making a difference in their formations, always leading the way. I am confident this will continue in 2005. We see our mission at the Engineer School of ensuring that we set the conditions for your units to do this for years to come. On that, we are fully committed, and together we will succeed. You are our Nation's greatest treasure and we are proud of you. Stand tall and carry on!

**ESSAYONS!**

What a GREAT  
Team!  
Thanks!  
RC

  
RANDAL R. CASTRO  
Major General, U.S. Army  
Commandant